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BA5020 ADVANCED DATABASE MANAGEMENT SYSTEM
DETAILED SYLLABS

OBJECTIVES

- To understand the various advanced databases used in the organization

- To be aware of recent trends in database management.

UNIT I INTRODUCTION

DBMS Models - Multimedia Databases, Parallel Databases, embedded, web, spatial, temporal databases, Virtualization, Active Databases - Embedded databases - Web databases.

UNIT II DATABASE IMPLEMENTATION

Query Processing basics and optimization – Heuristic Optimization – Transactions Models – Concurrency Control – Recovery – Security and Authorization – Storage – Indexing and Hashing – ISAM – B-Trees – Kd Trees – X Trees – Dynamic Hashing.

UNIT III DISTRIBUTED DATABASES

Distributed Databases – Queries – Optimization Access Strategies – Distributed Transactions Management – Concurrency Control – Reliability

UNIT IV OBJECT ORIENTED DATABASES

Object Oriented Concepts – Data Object Models –Object Oriented Databases – Issues in OODBMS - Object Oriented Relational Databases – Object Definition Languages – Object Query Languages

UNIT V EMERGING TRENDS

Data Mining – Data warehousing – Star, Snowflake, Fact Constellation; open source database systems, Scripting Language, JDBC, ODBC

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2. Ramez Elmasri and Shamkant B. Navethe,Fundamentals of Database Systems,7th edition, Pearson Education, 2015.
3. Jeffrey A Hoffer et al, Modern Database Management, 12th Edition, Pearson Education, 2016,
4. Abraham Silberchatz, Henry F. Korth and S.Sudarsan, Database System Concepts, 6th Edition, McGraw-Hill, 2015.
5. Thomas M. Connolly and Carolyn E. Begg, Database Systems – A Practical Approach to Design, Implementation and Management, 6 th edition, Pearson Education, 2015.

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